



#6

SEQUENCE LISTING

<110> ~~Sleeman, Lorna~~
Sleeman, Matthew
Abernethy, Nevin
Onrust, Rene
Kumble, Anand
Murison, Greg

<120> Compositions Isolated From Stromal Cells
and Methods For Their Use

<130> 11000.1037c3

<160> 61

<170> FastSEQ for Windows Version 4.0

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aaaaaaaaaa						1630

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 <212> DNA
 <213> Mouse

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<400> 6

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Val Leu Asn Gly Ser Ile Ser Pro Leu Trp Ala Val Ala Pro Thr Leu
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Gln Val Leu Ser Leu Arg Asp Val Gly Leu Gly Ser Gly Ala Ala Glu
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Met Asp Phe Ser Ala Phe Gly Asn Leu Arg Ala Leu Asp Leu Ser Gly
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Asn Ser Leu Thr Ser Phe Gln Lys Phe Lys Gly Ser Leu Ala Leu Arg
50 55 60
Thr Leu Asp Leu Arg Arg Asn Ser Leu Thr Ala Leu Pro Gln Arg Val
65 70 75 80
Val Ser Glu Gln Pro Leu Arg Gly Leu Gln Thr Ile Tyr Leu Ser Gln
85 90 95
Asn Pro Tyr Asp Cys Cys Gly Val Glu Gly Trp Gly Ala Leu Gln Gln
100 105 110
His Phe Lys Thr Val Ala Asp Leu Ser Met Val Thr Cys Asn Leu Ser
115 120 125
Ser Lys Ile Val Arg Val Val Glu Leu Pro Glu Gly Leu Pro Gln Gly
130 135 140
Cys Lys Trp Glu Gln Val Asp Thr Gly Leu Phe Tyr Leu Val Leu Ile
145 150 155 160
Leu Pro Ser Cys Leu Thr Leu Leu Val Ala Cys Thr Val Val Phe Leu
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Thr Phe Lys Lys Pro Leu Leu Gln Val Ile Lys Ser Arg Cys His Trp
180 185 190
Ser Ser Ile Tyr
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<210> 12
<211> 174
<212> PRT
<213> Mouse

<400> 12
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35 40 45
Leu Arg Asn Val Ser Cys Leu Trp Cys Asn Glu Asn Lys Ala Cys Met
50 55 60
Asp Tyr Pro Val Arg Lys Ile Leu Pro Pro Ala Ser Leu Cys Lys Leu
65 70 75 80
Ser Ser Ala Arg Trp Gly Val Cys Trp Val Asn Phe Glu Ala Leu Ile
85 90 95
Ile Thr Met Ser Val Leu Gly Gly Ser Val Leu Leu Gly Ile Thr Val
100 105 110
Cys Cys Cys Tyr Cys Cys Arg Arg Lys Lys Ser Arg Lys Pro Asp Lys
115 120 125
Ser Asp Glu Arg Ala Met Arg Glu Gln Glu Glu Arg Arg Val Arg Gln
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Glu Glu Arg Arg Ala Glu Met Lys Ser Arg His Asp Glu Ile Arg Lys
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Lys Tyr Gly Leu Phe Lys Glu Gln Asn Pro Tyr Glu Lys Phe
165 170

<210> 13

<211> 106
 <212> PRT
 <213> Mouse

<400> 13

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Cys	Gly	Pro	Cys	Ser	Thr	Thr	Ser	Pro	Ser	Thr	Trp	Val	Leu	Cys	Pro
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Leu	Pro	Met	Ser	Pro	Leu	Cys	Pro	Thr	Cys	Val	Ser	Thr	Met	Thr	Leu
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Ala	Thr	Cys	Thr	Cys	Pro	Trp	Ser	Thr	Thr	Cys	Pro	Cys	Thr	Leu	Ala
65					70					75					80
Pro	Asn	His	Gly	Ile	Ala	Ser	Asp	Thr	Gln	Ser	Pro	Val	Ser	Arg	Ala
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Glu	Ser	Val	Gly	Gly	Pro	Ser	Leu	Ile	Phe						
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<210> 14
 <211> 268
 <212> PRT
 <213> Mouse

<400> 14

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			20					25				30			
Ser	Arg	Ala	Arg	Gly	Ser	Gly	Cys	Arg	Val	Gly	Ala	Ser	Ala	Arg	Gly
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Thr	Gly	Ala	Asp	Gly	Arg	Glu	Ala	Glu	Gly	Cys	Gly	Thr	Val	Ala	Leu
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65					70					75					80
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Ala	Val	Asn	Gly	Leu	Tyr	Arg	Val	Arg	Val	Pro	Arg	Arg	Pro	Gly	Thr
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Leu	Asp	Gly	Ser	Glu	Ala	Gly	Gly	His	Val	Ser	Ser	Phe	Val	Pro	Ala
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Cys	Ser	Leu	Val	Glu	Ser	His	Leu	Ser	Asp	Gln	Leu	Thr	Leu	His	Val
145					150					155					160
Asp	Val	Ala	Gly	Asn	Val	Val	Gly	Leu	Ser	Val	Val	Val	Tyr	Pro	Gly
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Gly	Cys	Arg	Gly	Ser	Glu	Val	Glu	Asp	Glu	Asp	Leu	Glu	Leu	Phe	Asn
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Thr	Ser	Val	Gln	Leu	Arg	Pro	Pro	Ser	Thr	Ala	Pro	Gly	Pro	Glu	Thr
		195					200					205			
Ala	Ala	Phe	Ile	Glu	Arg	Leu	Glu	Met	Glu	Gln	Ala	Gln	Lys	Ala	Lys
		210				215					220				
Asn	Pro	Gln	Glu	Gln	Lys	Ser	Phe	Phe	Ala	Lys	Tyr	Trp	Met	Tyr	Ile
225					230					235					240
Ile	Pro	Val	Val	Leu	Phe	Leu	Met	Met	Ser	Gly	Ala	Pro	Asp	Ala	Gly

Pro Gln Gln Val Ser Ile Gln Phe Gln Val His Tyr Thr Thr Asn Thr
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Asp Val Gln Phe Ile Ala Val Thr Gly Asp His Glu Ser Leu Gly Arg
260 265 270
Trp Asn Thr Tyr Ile Pro Leu His Tyr Cys Lys Asp Gly Leu Trp Ser
275 280 285
His Ser Val Phe Leu Pro Ala Asp Thr Val Val Glu Trp Lys Phe Val
290 295 300
Leu Val Glu Asn Lys Glu Val Thr Arg Trp Glu Glu Cys Ser Asn Arg
305 310 315 320
Phe Leu Gln Thr Gly His Glu Asp Lys Val Val His Gly Trp Trp Gly
325 330 335
Ile His

<210> 17
<211> 119
<212> PRT
<213> Mouse

<400> 17
Gly Thr Ser Pro Ala Ser Val Leu Arg Ser Val Ser Ser Asp Pro Ser
1 5 10 15
Leu Pro Pro Pro Ser Met Ala Ser Leu Leu Cys Cys Gly Pro Lys Leu
20 25 30
Ala Ala Cys Gly Ile Val Leu Ser Ala Trp Gly Val Ile Met Leu Ile
35 40 45
Met Leu Gly Ile Phe Phe Asn Val His Ser Ala Val Leu Ile Glu Asp
50 55 60
Val Pro Phe Thr Glu Lys Asp Phe Glu Asn Gly Pro Gln Asn Ile Tyr
65 70 75 80
Asn Leu Tyr Glu Gln Val Ser Tyr Asn Cys Phe Ile Ala Ala Gly Leu
85 90 95
Tyr Leu Leu Leu Gly Gly Phe Ser Phe Cys Gln Val Arg Leu Asn Lys
100 105 110
Arg Lys Glu Tyr Met Val Arg
115

<210> 18
<211> 280
<212> PRT
<213> Mouse

<400> 18
Met Val Pro Trp Phe Leu Leu Ser Leu Leu Leu Leu Ala Arg Pro Val
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Pro Gly Val Ala Tyr Ser Val Ser Leu Pro Ala Ser Phe Leu Glu Asp
20 25 30
Val Ala Gly Ser Gly Glu Ala Glu Gly Ser Ser Ala Ser Ser Pro Ser
35 40 45
Leu Pro Pro Pro Gly Thr Pro Ala Phe Ser Pro Thr Pro Glu Arg Pro
50 55 60
Gln Pro Thr Ala Leu Asp Gly Pro Val Pro Pro Thr Asn Leu Leu Glu
65 70 75 80
Gly Ile Met Asp Phe Phe Arg Gln Tyr Val Met Leu Ile Ala Val Val
85 90 95
Gly Ser Leu Thr Phe Leu Ile Met Phe Ile Val Cys Ala Ala Leu Ile

Thr Arg Gln Lys His Lys Ala Thr Ala Tyr Tyr Pro Ser Ser Phe Pro
 115 120 125
 Glu Lys Lys Tyr Val Asp Gln Arg Asp Arg Ala Gly Gly Pro Arg Thr
 130 135 140
 Phe Ser Glu Val Pro Asp Arg Ala Pro Asp Ser Arg His Glu Glu Gly
 145 150 155 160
 Leu Asp Thr Ser His Gln Leu Gln Ala Asp Ile Leu Ala Ala Thr Gln
 165 170 175
 Asn Leu Arg Ser Pro Ala Arg Ala Leu Pro Gly Asn Gly Glu Gly Ala
 180 185 190
 Lys Pro Val Lys Gly Gly Ser Glu Glu Glu Glu Glu Glu Val Leu Ser
 195 200 205
 Gly Gln Glu Glu Ala Gln Glu Ala Pro Val Cys Gly Val Thr Glu Glu
 210 215 220
 Lys Leu Gly Val Pro Glu Glu Ser Val Ser Ala Glu Ala Glu Gly Val
 225 230 235 240
 Pro Ala Thr Ser Glu Gly Gln Gly Glu Ala Glu Gly Ser Phe Ser Leu
 245 250 255
 Ala Gln Glu Ser Gln Gly Ala Thr Gly Pro Pro Glu Ser Pro Cys Ala
 260 265 270
 Cys Asn Arg Val Ser Pro Ser Val
 275 280

<210> 19
 <211> 188
 <212> PRT
 <213> Mouse

<400> 19
 Met Ala Leu Cys Ala Arg Ala Ala Leu Leu Leu Gly Val Leu Gln Val
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 Leu Ala Leu Leu Gly Ala Ala Gln Asp Pro Thr Asp Ala Gln Gly Ser
 20 25 30
 Ala Ser Gly Asn His Ser Val Leu Thr Ser Asn Ile Asn Ile Thr Glu
 35 40 45
 Asn Thr Asn Gln Thr Met Ser Val Val Ser Asn Gln Thr Ser Glu Met
 50 55 60
 Gln Ser Thr Ala Lys Pro Ser Val Leu Pro Lys Thr Thr Thr Leu Ile
 65 70 75 80
 Thr Val Lys Pro Ala Thr Ile Val Lys Ile Ser Thr Pro Gly Val Leu
 85 90 95
 Pro His Val Thr Pro Thr Ala Ser Lys Ser Thr Pro Asn Ala Ser Ala
 100 105 110
 Ser Pro Asn Ser Thr His Thr Ser Ala Ser Met Thr Thr Pro Ala His
 115 120 125
 Ser Ser Leu Leu Thr Thr Val Thr Val Ser Ala Thr Thr His Pro Thr
 130 135 140
 Lys Gly Lys Gly Ser Lys Phe Asp Ala Gly Ser Phe Val Gly Gly Ile
 145 150 155 160
 Gly Val Asn Thr Gly Ser Phe Ile Tyr Ser Leu His Trp Met Gln Asn
 165 170 175
 Val Leu Phe Lys Lys Arg His Ser Val Pro Lys His
 180 185

<210> 20
 <211> 317

<212> PRT
<213> Mouse

<400> 20

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Met Arg Ser Gly Ala Leu Trp Pro Leu Leu Trp Gly Ala Leu Val Trp
 1          5          10          15
Thr Val Gly Ser Val Gly Ala Val Met Gly Ser Glu Asp Ser Val Pro
      20          25          30
Gly Gly Val Cys Trp Leu Gln Gln Gly Arg Glu Ala Thr Cys Ser Leu
      35          40          45
Val Leu Lys Thr Arg Val Ser Arg Glu Glu Cys Cys Ala Ser Gly Asn
      50          55          60
Ile Asn Thr Ala Trp Ser Asn Phe Thr His Pro Gly Asn Lys Ile Ser
65          70          75          80
Leu Leu Gly Phe Leu Gly Leu Val His Cys Leu Pro Cys Lys Asp Ser
      85          90          95
Cys Asp Gly Val Glu Cys Gly Pro Gly Lys Ala Cys Arg Asn Ala Gly
      100          105          110
Gly Ala Ser Asn Asn Cys Glu Cys Val Pro Asn Cys Glu Gly Phe Pro
      115          120          125
Ala Gly Phe Gln Val Cys Gly Ser Asp Gly Ala Thr Tyr Arg Asp Glu
      130          135          140
Cys Glu Leu Arg Thr Ala Arg Cys Arg Gly His Pro Asp Leu Arg Val
145          150          155          160
Met Tyr Arg Gly Arg Cys Gln Lys Ser Cys Ala Gln Val Val Cys Pro
      165          170          175
Arg Pro Gln Ser Cys Leu Val Asp Gln Thr Gly Ser Ala His Cys Val
      180          185          190
Val Cys Arg Ala Ala Pro Cys Pro Val Pro Ser Asn Pro Gly Gln Glu
      195          200          205
Leu Cys Gly Asn Asn Asn Val Thr Tyr Ile Ser Ser Cys His Leu Arg
      210          215          220
Gln Ala Thr Cys Phe Leu Gly Arg Ser Ile Gly Val Arg His Pro Gly
225          230          235          240
Ile Cys Thr Gly Gly Pro Lys Phe Leu Lys Ser Gly Asp Ala Ala Ile
      245          250          255
Val Asp Met Val Pro Gly Lys Pro Met Cys Val Glu Ser Phe Ser Asp
      260          265          270
Tyr Pro Pro Leu Gly Arg Phe Ala Val Arg Asp Met Arg Gln Thr Val
      275          280          285
Ala Val Gly Val Ile Lys Ala Val Asp Lys Lys Ala Ala Gly Ala Gly
      290          295          300
Lys Val Thr Lys Ser Ala Gln Lys Ala Gln Lys Ala Lys
305          310          315

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<210> 21
<211> 384
<212> DNA
<213> Mouse

<220>

<221> misc_feature
<222> (1)...(384)
<223> n = A,T,C or G

<400> 21

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60

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tgtgggtgg	cagaagttt	tgggtgtgc	cacgggtgat	gtgtgggtcac	ggcctgatgg	180
ctcctacctc	aacaagctgc	tcatctctcg	ggcccgcag	gatgatgctg	gcatgtacat	240
ctgcctaggt	gcaaatacca	tgggctacag	tttccgtagc	gccttcctca	ctgtattacc	300
agaccccaaa	cctccagggc	ctcctatggc	ttcttcacgc	tcattccaaa	gcctgcatg	360
gcctgtggng	atcggcatcc	cagc				384

<210> 22

<211> 1967

<212> DNA

<213> Mouse

<400> 22

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agctcgggc	cgaggggggc	cggaccctgg	ctctgcgggc	gcgacctggg	tcttgccggc	120
ctgagccctg	agtggcgtcc	agtccagctc	ccagtgaacc	cgccctgct	tcaggtccga	180
ccggcgagat	gacgcggagc	cccgcgtgc	tgtctgtct	attggggggc	ctcccgctcg	240
ctgaggcggc	gcgaggacc	ccaagaatgg	cagacaaagt	ggccccacgg	caggtggccc	300
gcctggggcg	cactgtgcgg	ctacagtgc	cagtggagg	ggaccacca	ccgttgacca	360
tgtggaccaa	agatggccgc	acaatccaca	gtggctggag	ccgcttcctg	gtgctgcgc	420
agggctctgaa	ggtgaaggag	gtggaggccg	aggatgccgg	tgtttatgtg	tgcaaggcca	480
ccaatggctt	tggcagcctc	agcgtcaact	acactctcat	catcatggat	gatattagtc	540
caggggaagga	gagccctggg	ccagggtggt	cttcgggggg	ccaggaggac	ccagccagcc	600
agcagtgggc	acggcctcgc	ttcacacagc	cctccaagat	gaggcgccga	gtgattgcac	660
ggcctgtggg	tggctctgtg	tggctctgtg	gtgtggccag	tgggctadcca	cggctcagac	720
tcatgtggat	gaaggatgac	cagacctga	cgcactctaga	ggctagtga	cacagaaaga	780
agaagtggac	actgagcttg	aagaacctga	agcctgaaga	cagtggcaag	tacacgtgcc	840
gtgtatctaa	caaggccggg	gccatcaacg	ccacctacaa	agtggatgta	atccagcggg	900
ctcgttccaa	gctgtgtgct	acagggacac	accctgtgaa	cacaacgggtg	gacttcgggtg	960
ggacaacgtc	cttcagtgct	aagggtgcga	gtgacgtgaa	gcctgtgatc	cagtggctga	1020
agcgggtgga	gtacggctcc	gagggacgc	acaactccac	cattgatgtg	ggtggccaga	1080
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gcatcccagc	tgggtgctgc	ttcatcctag	gcactgtgct	gctctggctt	tgccagacca	1380
agaagaagcc	atgtgcccc	gcactctacac	ttcctgtgcc	tgggcatcgt	ccccagggg	1440
catcccagga	acgcagtgg	gacaaggacc	tgccctcatt	ggctgtgggc	atatgtgagg	1500
agcatggatc	cgccatggcc	ccccagcaca	tcctggcctc	tggctcaact	gctggcccca	1560
agctgtaccc	caagctatac	acagatgtgc	acacacacac	acatacacac	acctgcactc	1620
acacgctctc	atgtggagg	caagggtcat	caacaccagc	atgtccacta	tcagtgtctaa	1680
atacagcgaa	tctccaagca	ctgtgtcctg	aggtaggcat	atggggggcca	aggcaacagg	1740
ttgggagaat	tgagaacaat	ggaggaagag	tatcttaggg	tgcttatgg	tggacactca	1800
caaacttgcc	catatagatg	tatgtactac	cagatgaaca	gccagccaga	ttcacacacg	1860
cacatgttta	aacgtgtaaa	cgtgtgcaca	actgcacaca	caacctgaga	aaccttcagg	1920
aggatttg	gtgtgacttt	gcagtgacat	gtagcagatg	ctagttg		1967

<210> 23

<211> 1742

<212> DNA

<213> Mouse

<400> 23

gcgcggcgcc	ccgggcccct	cgccccgcgc	ccccctcttc	ccgcctctgc	caagcctcgc	60
cgtttatccg	cgcggacagc	gcgcggcgcc	ccccagcccc	gcctagccg	ccagcgccca	120
ggtagcgccg	ccccgcggag	gcccggggcg	ggggcggggg	gggcgggatg	cggcgccggg	180
ggcagcgatg	accgcgtcgc	gctgctcagg	ggcccggtc	tgaccccggt	gcctgctgcg	240

cgccccgcgc	ctgatccctg	tgcagcgtct	acgcgcctcg	cttcctttgc	ctggagctcg	300
gcgcgcgagg	gggcgcgacc	ctggctctgc	ggcgcgcacc	tgggtcttgc	gggcctgagc	360
cctgagtggc	gtccagtgca	gtccccagtg	accgcgcgcc	tgcttcaggt	cgcaccggcg	420
agatgacgcg	gagccccgcg	ctgctgctgc	tgctattggg	ggccctcccg	tcggctgagg	480
cggcgcgaga	tgatattagt	ccagggaagg	agagccctgg	gccaggtggt	tcttcggggg	540
gccaggagga	cccagccagc	cagcagtggg	cacggcctcg	cttcacacag	ccctccaaga	600
tgaggcgccg	agtgattgca	cggcctgtgg	gtagctctgt	gcggctcaag	tgtgtggcca	660
gtgggcaccc	acggccagac	atcatgtgga	tgaaggatga	ccagaccttg	acgcattctag	720
aggctagtga	acacagaaag	aagaagtgga	cactgagctt	gaagaacctg	aagcctgaag	780
acagtggcaa	gtacacgtgc	cgtgtatcta	acaaggccgg	tgccatcaac	gccacctaca	840
aagtggatgt	aatccagcgg	actcgttcca	agcctgtgct	cacagggaca	cacctctgtga	900
acacaacggt	ggacttcggt	gggacaacgt	ctctccagtg	caaggctcgc	agtgactgta	960
agcctgtgat	ccagtggctg	aagcgggtgg	agtacggctc	cgagggacgc	cacaactcca	1020
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ctgatggctc	ctacctcaac	aagctgctca	tctctcgggc	ccgccaggat	gatgctggca	1140
tgtacatctg	cctaggtgca	aataccatgg	gctacagttt	ccgtagcgcc	ttctcactcg	1200
tattaccaga	ccccaaacct	cctccagggc	ctcctatggc	ttcttcacat	tcateccaaa	1260
gcctgccatg	gcctgtgggt	atcggcatcc	cagctgggtc	tgtcttcac	ctaggcactg	1320
tgctgctctg	gctttgccag	accaagaaga	agccatgtgc	cccagcatct	acacttctct	1380
tgcttgggca	tcgtccccc	gggacatccc	gagaacgcag	tggtgacaag	gacctgccct	1440
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cctctggctc	aactgctggc	cccaagctgt	accccagct	atacacagat	gtgcacacac	1560
acacacatac	acacacctgc	actcacacgc	tctcatgtgg	agggcaagg	tcatacaaac	1620
cagcatgtcc	actatcagtg	ctaaatacag	cgaatctcca	agcactgtgt	cctgaggtag	1680
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<210>	24
<211>	1004
<212>	DNA
<213>	Human

[illegible]

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<210> 25
<211> 478
<212> DNA
<213> Mouse
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<400> 25

Gly	Arg	His	Asn	Ser	Thr	Ile	Asp	Val	Gly	Gly	Gln	Lys	Phe	Val	Val
		35					40					45			
Leu	Pro	Thr	Gly	Asp	Val	Trp	Ser	Arg	Pro	Asp	Gly	Ser	Tyr	Leu	Asn
		50				55					60				
Lys	Leu	Leu	Ile	Ser	Arg	Ala	Arg	Gln	Asp	Asp	Ala	Gly	Met	Tyr	Ile
65					70					75					80
Cys	Leu	Gly	Ala	Asn	Thr	Met	Gly	Tyr	Ser	Phe	Arg	Ser	Ala	Phe	Leu
				85					90					95	
Thr	Val	Leu	Pro	Asp	Pro	Lys	Pro	Pro	Gly	Pro	Pro	Met	Ala	Ser	Ser
			100					105					110		
Ser	Ser	Ser	Thr	Ser	Leu	Pro	Trp	Pro	Val	Xaa	Gly	Ile	Pro		
		115					120					125			

<210> 31

<211> 529

<212> PRT

<213> Mouse

<400> 31

Met	Thr	Arg	Ser	Pro	Ala	Leu	Leu	Leu	Leu	Leu	Leu	Gly	Ala	Leu	Pro
1				5					10					15	
Ser	Ala	Glu	Ala	Ala	Arg	Gly	Pro	Pro	Arg	Met	Ala	Asp	Lys	Val	Val
		20						25				30			
Pro	Arg	Gln	Val	Ala	Arg	Leu	Gly	Arg	Thr	Val	Arg	Leu	Gln	Cys	Pro
		35					40					45			
Val	Glu	Gly	Asp	Pro	Pro	Pro	Leu	Thr	Met	Trp	Thr	Lys	Asp	Gly	Arg
	50					55					60				
Thr	Ile	His	Ser	Gly	Trp	Ser	Arg	Phe	Arg	Val	Leu	Pro	Gln	Gly	Leu
65					70					75					80
Lys	Val	Lys	Glu	Val	Glu	Ala	Glu	Asp	Ala	Gly	Val	Tyr	Val	Cys	Lys
				85					90					95	
Ala	Thr	Asn	Gly	Phe	Gly	Ser	Leu	Ser	Val	Asn	Tyr	Thr	Leu	Ile	Ile
		100						105					110		
Met	Asp	Asp	Ile	Ser	Pro	Gly	Lys	Glu	Ser	Pro	Gly	Pro	Gly	Gly	Ser
	115					120						125			
Ser	Gly	Gly	Gln	Glu	Asp	Pro	Ala	Ser	Gln	Gln	Trp	Ala	Arg	Pro	Arg
	130					135					140				
Phe	Thr	Gln	Pro	Ser	Lys	Met	Arg	Arg	Arg	Val	Ile	Ala	Arg	Pro	Val
145					150					155					160
Gly	Ser	Ser	Val	Arg	Leu	Lys	Cys	Val	Ala	Ser	Gly	His	Pro	Arg	Pro
				165					170					175	
Asp	Ile	Met	Trp	Met	Lys	Asp	Asp	Gln	Thr	Leu	Thr	His	Leu	Glu	Ala
		180						185					190		
Ser	Glu	His	Arg	Lys	Lys	Lys	Trp	Thr	Leu	Ser	Leu	Lys	Asn	Leu	Lys
	195						200					205			
Pro	Glu	Asp	Ser	Gly	Lys	Tyr	Thr	Cys	Arg	Val	Ser	Asn	Lys	Ala	Gly
	210					215						220			
Ala	Ile	Asn	Ala	Thr	Tyr	Lys	Val	Asp	Val	Ile	Gln	Arg	Thr	Arg	Ser
225					230					235					240
Lys	Pro	Val	Leu	Thr	Gly	Thr	His	Pro	Val	Asn	Thr	Thr	Val	Asp	Phe
				245					250					255	
Gly	Gly	Thr	Thr	Ser	Phe	Gln	Cys	Lys	Val	Arg	Ser	Asp	Val	Lys	Pro
			260					265					270		
Val	Ile	Gln	Trp	Leu	Lys	Arg	Val	Glu	Tyr	Gly	Ser	Glu	Gly	Arg	His
	275						280					285			
Asn	Ser	Thr	Ile	Asp	Val	Gly	Gly	Gln	Lys	Phe	Val	Val	Leu	Pro	Thr
	290					295									300

Val Val Leu Asp Asp Ile Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp
 115 120 125
 Ser Ser Ser Gly Gly Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg
 130 135 140
 Pro Arg Phe Thr Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg
 145 150 155 160
 Pro Val Gly Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro
 165 170 175
 Arg Pro Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro
 180 185 190
 Glu Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn
 195 200 205
 Leu Arg Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn Arg
 210 215 220
 Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln Arg Thr
 225 230 235 240
 Arg Ser Lys Pro Val Leu Thr Gly Thr His Pro Val Asn Thr Thr Val
 245 250 255
 Asp Phe Gly Gly Thr Thr Ser Phe Gln Cys Lys Val Arg Ser Asp Val
 260 265 270
 Lys Pro Val Ile Gln Trp Leu Lys Arg Val Glu Tyr Gly Ala Glu Gly
 275 280 285
 Arg His Asn Ser Thr Ile Asp Val Gly Gly Gln Lys Phe Val Val Leu
 290 295 300
 Pro Thr Gly Asp Val Trp Ser Arg Pro Asp Gly Ser Tyr Leu Asn Lys
 305 310 315 320
 Pro Leu

<210> 34
 <211> 102
 <212> PRT
 <213> Mouse

<400> 34
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 1 5 10 15
 Thr Arg Gly Thr Glu Pro Glu Leu Ser Glu Thr Gln Arg Arg Ser Leu
 20 25 30
 Gln Val Ala Leu Glu Glu Phe His Lys His Pro Pro Val Gln Leu Ala
 35 40 45
 Phe Gln Glu Ile Gly Val Asp Arg Ala Glu Glu Val Leu Phe Ser Ala
 50 55 60
 Gly Thr Phe Val Arg Leu Glu Phe Lys Leu Gln Gln Thr Asn Cys Pro
 65 70 75 80
 Lys Lys Asp Trp Lys Lys Pro Glu Cys Thr Ile Lys Pro Asn Gly Ala
 85 90 95
 Glu Met Pro Gly Leu His
 100

<210> 35
 <211> 147
 <212> PRT
 <213> Mouse

<400> 35
 Met Lys Phe Leu Leu Ile Ser Leu Ala Leu Trp Leu Gly Thr Val Gly

Thr Arg Gly Thr Glu Pro Glu Leu Ser Glu Thr Gln Arg Arg Ser Leu
 20 25 30
 Gln Val Ala Leu Glu Glu Phe His Lys His Pro Pro Val Gln Leu Ala
 35 40 45
 Phe Gln Glu Ile Gly Val Asp Arg Ala Glu Glu Val Leu Phe Ser Ala
 50 55 60
 Gly Thr Phe Val Arg Leu Glu Phe Lys Leu Gln Gln Thr Asn Cys Pro
 65 70 75 80
 Lys Lys Asp Trp Lys Lys Pro Glu Cys Thr Ile Lys Pro Asn Gly Arg
 85 90 95
 Arg Arg Lys Cys Leu Ala Cys Ile Lys Met Asp Pro Lys Gly Lys Ile
 100 105 110
 Leu Gly Arg Ile Val His Cys Pro Ile Leu Lys Gln Gly Pro Gln Asp
 115 120 125
 Pro Gln Glu Leu Gln Cys Ile Lys Ile Ala Gln Ala Gly Glu Asp Pro
 130 135 140
 His Gly Tyr
 145

<210> 36
 <211> 574
 <212> PRT
 <213> Mouse

<400> 36

Met Glu Ser Leu Cys Gly Val Leu Gly Phe Leu Leu Leu Ala Ala Gly
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 Leu Pro Leu Gln Ala Ala Lys Arg Phe Arg Asp Val Leu Gly His Glu
 20 25 30
 Gln Tyr Pro Asn His Met Arg Glu His Asn Gln Leu Arg Gly Trp Ser
 35 40 45
 Ser Asp Glu Asn Glu Trp Asp Glu His Leu Tyr Pro Val Trp Arg Arg
 50 55 60
 Gly Asp Gly Arg Trp Lys Asp Ser Trp Glu Gly Gly Arg Val Gln Ala
 65 70 75 80
 Val Leu Thr Ser Asp Ser Pro Ala Leu Val Gly Ser Asn Ile Thr Phe
 85 90 95
 Val Val Asn Leu Val Phe Pro Arg Cys Gln Lys Glu Asp Ala Asn Gly
 100 105 110
 Asn Ile Val Tyr Glu Lys Asn Cys Arg Asn Asp Leu Gly Leu Thr Ser
 115 120 125
 Asp Leu His Val Tyr Asn Trp Thr Ala Gly Ala Asp Asp Gly Asp Trp
 130 135 140
 Glu Asp Gly Thr Ser Arg Ser Gln His Leu Arg Phe Pro Asp Arg Arg
 145 150 155 160
 Pro Phe Pro Arg Pro His Gly Trp Lys Lys Trp Ser Phe Val Tyr Val
 165 170 175
 Phe His Thr Leu Gly Gln Tyr Phe Gln Lys Leu Gly Arg Cys Ser Ala
 180 185 190
 Arg Val Ser Ile Asn Thr Val Asn Leu Thr Ala Gly Pro Gln Val Met
 195 200 205
 Glu Val Thr Val Phe Arg Arg Tyr Gly Arg Ala Tyr Ile Pro Ile Ser
 210 215 220
 Lys Val Lys Asp Val Tyr Val Ile Thr Asp Gln Ile Pro Val Phe Val
 225 230 235 240
 Thr Met Ser Gln Lys Asn Asp Arg Asn Leu Ser Asp Glu Ile Phe Leu

65 70 75 80
 Lys Ser Leu Asn Lys Ala Ser Val Glu Asn Leu Leu Thr Glu Ile Glu
 85 90 95
 Ile Leu Lys Gly Ile Arg His Pro His Ile Val Gln Leu Lys Asp Phe
 100 105 110
 Gln Trp Asp Asn Asp Asn Ile Tyr Leu Ile Met Glu Phe Cys Ala Gly
 115 120 125
 Gly Asp Leu Ser Arg Phe Ile His Thr
 130 135

<210> 38
 <211> 72
 <212> PRT
 <213> Mouse

<400> 38
 Thr Val Leu Phe Leu Val Ala Leu Ile Thr Val Gly Met Asn Thr Thr
 1 5 10 15
 Tyr Val Val Ser Cys Pro Lys Glu Phe Glu Lys Pro Gly Ala Cys Pro
 20 25 30
 Lys Pro Ser Pro Glu Ser Val Gly Ile Cys Val Asp Gln Cys Ser Gly
 35 40 45
 Asp Gly Ser Cys Pro Gly Asn Met Lys Cys Cys Ser Asn Ser Cys Gly
 50 55 60
 His Val Cys Lys Thr Pro Val Phe
 65 70

<210> 39
 <211> 1587
 <212> DNA
 <213> Mouse

<400> 39
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 gagacagcgg cacagcgtg cttctgccag gttagtgggt acctggacga ctgtacctgt 180
 gatgtcgaga ccatcgataa gtttaataac tacagacttt tccaagact acaaaagctt 240
 cttgaaagtg actacttttag atattacaag gtgaacttga agaagccttg tcctttctgg 300
 aatgacatca accagtgtgg aagaagagac tgtgccgtca aaccctgcca ttctgatgaa 360
 gttcctgatg gaattaagtc tgcgagctac aagtattctg aggaagccaa ccgcattgaa 420
 gaatgtgagc aagctgagcg acttggagcc gtggatgagt ctctgagtga ggagacccag 480
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 gatatacagt ccccgatgc tgagtatgtg gacttactcc ttaaccctga gcgctacaca 600
 ggctacaagg ggccagacgc ttggaggata tggagtgtca tctatgaaga aaactgtttt 660
 aagccacaga caattcaaag gcctttggct tctgggcgag gaaaaagtaa agagAACACA 720
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[Faint bleed-through from reverse side]

<210> 42

<212> DNA

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<211> 1871

<212> DNA
<213> Mouse

<400> 43

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<211> 3767
<212> DNA
<213> Mouse

<400> 44

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 <213> Mouse

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 <211> 1423
 <212> DNA
 <213> Mouse

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<210> 47
 <211> 464
 <212> PRT
 <213> Mouse

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Leu Ile Glu Leu Arg Ala Leu Ser Lys Val Leu Pro Phe Phe Glu Arg
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Pro Asp Phe Gln Leu Phe Thr Gly Asn Lys Val Gln Asp Ala Glu Asn
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<210> 48
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<212> PRT
<213> Mouse

<400> 48

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Val	Trp	His	Thr	Glu	Arg	Gly	Val	Cys	Leu	Pro	Thr	Val	Ser	Leu	Trp
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Ile	Leu	Phe	Val	Tyr	Ile	Glu	Ala	Ala	Ile	Arg	Phe	Lys	Asp	Leu	Lys
	130					135						140			
Asn	Phe	His	Val	Asp	Leu	Cys	Arg	Pro	Phe	Ala	Ala	His	Cys	Ile	Gly
145					150					155					160
Tyr	Pro	Val	Val	Thr	Leu	Gly	Phe	Gly	Phe	Lys	Ser	Tyr	Val	Ser	Tyr
				165					170					175	
Lys	Met	Arg	Leu	Arg	Lys	Gln	Lys	Glu	Val	Gln	Lys	Glu	Asn	Glu	Phe
			180					185					190		
Tyr	Met	Gln	Leu	Leu	Gln	Gln	Ala	Leu	Pro	Pro	Glu	Gln	Gln	Met	Leu
		195					200						205		
Gln	Lys	Gln	Glu	Lys	Glu	Ala	Glu	Glu	Ala	Ala	Lys	Gly	Leu	Pro	Asp
	210					215					220				
Met	Asp	Ser	Ser	Ile	Leu	Ile	His	His	Asn	Gly	Gly	Ile	Pro	Ala	Asn
225					230					235					240
Lys	Lys	Leu	Ser	Thr	Thr	Leu	Pro	Glu	Ile	Glu	Tyr	Arg	Glu	Lys	Gly
				245					250					255	
Lys	Glu	Lys	Asp	Lys	Asp	Ala	Lys	Lys	His	Asn	Leu	Gly	Ile	Asn	Asn
			260					265					270		
Asn	Asn	Ile	Leu	Gln	Pro	Val	Asp	Ser	Lys	Ile	Gln	Glu	Ile	Glu	Tyr
		275					280						285		
Met	Glu	Asn	His	Ile	Asn	Ser	Lys	Arg	Leu	Asn	Asn	Asp	Leu	Val	Gly
	290					295					300				
Ser	Thr	Glu	Asn	Leu	Leu	Lys	Glu	Asp	Ser	Cys	Thr	Ala	Ser	Ser	Lys
305					310					315					320
Asn	Tyr	Lys	Asn	Ala	Ser	Gly	Val	Val	Asn	Ser	Ser	Pro	Arg	Ser	His
				325					330					335	
Ser	Ala	Thr	Asn	Gly	Ser	Ile	Pro	Ser	Ser	Ser	Ser	Lys	Asn	Glu	Lys
			340					345					350		
Lys	Gln	Lys	Cys	Thr	Ser	Lys	Gly	Pro	Ser	Ala	His	Lys	Asp	Leu	Met
		355					360					365			
Glu	Asn	Cys	Ile	Pro	Asn	Asn	Gln	Leu	Ser	Lys	Pro	Asp	Ala	Leu	Val
	370					375					380				
Arg	Leu	Glu	Gln	Asp	Ile	Lys	Lys	Leu	Lys	Ala	Asp	Leu	Gln	Ala	Ser
385					390					395					400
Arg	Gln	Val	Glu	Gln	Glu	Leu	Arg	Ser	Gln	Ile	Ser	Ala	Leu	Ser	Ser
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<211> 199
<212> PRT
<213> Mouse
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Pro	Asp	Val	Glu	Ala	Tyr	Cys	Leu	Arg	Cys	Glu	Cys	Lys	Tyr	Glu	Glu	
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Arg	Ser	Ser	Val	Thr	Ile	Lys	Val	Thr	Ile	Ile	Ile	Tyr	Leu	Ser	Ile	
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Leu	Gly	Leu	Leu	Leu	Leu	Tyr	Met	Val	Tyr	Leu	Thr	Leu	Val	Glu	Pro	
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Ile	Leu	Lys	Arg	Arg	Leu	Phe	Gly	His	Ser	Gln	Leu	Leu	Gln	Ser	Asp	
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Asp	Asp	Val	Gly	Asp	His	Gln	Pro	Phe	Ala	Asn	Ala	His	Asp	Val	Leu	

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 Ala Arg Ser Arg Ser Arg Ala Asn Val Leu Asn Lys Val Glu Tyr Ala
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 Asp Arg His Val Val Leu Ser
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 Arg Val Ser Cys Thr Tyr Asp Ala Leu Lys His Trp Gly Arg Arg Lys
 35 40 45
 Ala Trp Cys Arg Gln Leu Gly Glu Glu Gly Pro Cys Gln Arg Val Val
 50 55 60
 Ser Thr His Gly Val Trp Leu Leu Ala Phe Leu Lys Lys Arg Asn Gly
 65 70 75 80
 Ser Thr Val Ile Ala Asp Asp Thr Leu Ala Gly Thr Val Thr Ile Thr
 85 90 95
 Leu Lys Asn Leu Gln Ala Gly Asp Ala Gly Leu Tyr Gln Cys Gln Ser
 100 105 110
 Leu Arg Gly Arg Glu Ala Glu Val Leu Gln Lys Val Leu Val Glu Val
 115 120 125
 Leu Glu Asp Pro Leu Asp Asp Gln Asp Ala Gly Asp Leu Trp Val Pro
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 Glu Glu Ser Ser Ser Phe Glu Gly Ala Gln Val Glu His Ser Thr Ser
 145 150 155 160
 Arg Asn Gln Glu Thr Ser Phe Pro Pro Thr Ser Ile Leu Leu Leu Leu
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 Ala Cys Val Leu Leu Ser Lys Phe Leu Ala Ala Ser Ile Leu Trp Ala
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 Gly Gly Thr
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<400> 52

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			20					25					30		
Leu	Arg	Leu	Val	Gly	Pro	Ala	Asp	Arg	Pro	Lys	Glu	Gly	Arg	Leu	Glu
		35					40					45			
Val	Leu	His	Gln	Gly	Gln	Trp	Gly	Thr	Val	Cys	Asp	Asp	Asp	Phe	Ala
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Leu	Gln	Glu	Ala	Thr	Val	Ala	Cys	Arg	Gln	Leu	Gly	Phe	Glu	Ser	Ala
65					70					75					80
Leu	Thr	Trp	Ala	His	Ser	Ala	Lys	Tyr	Gly	Gln	Gly	Glu	Gly	Pro	Ile
				85					90					95	
Trp	Leu	Asp	Asn	Val	Arg	Cys	Leu	Gly	Thr	Glu	Lys	Thr	Leu	Asp	Gln
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Cys	Gly	Ser	Asn	Gly	Trp	Gly	Ile	Ser	Asp	Cys	Arg	His	Ser	Glu	Asp
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Val	Gly	Val	Val	Cys	His	Pro	Arg	Arg	Gln	His	Gly	Tyr	His	Ser	Glu
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Lys	Val	Ser	Asn	Ala	Leu	Gly	Pro	Gln	Gly	Arg	Arg	Leu	Glu	Glu	Val
145					150					155					160
Arg	Leu	Lys	Pro	Ile	Leu	Ala	Ser	Ala	Lys	Arg	His	Ser	Pro	Val	Thr
				165					170					175	
Glu	Gly	Ala	Val	Glu	Val	Arg	Tyr	Asp	Gly	His	Trp	Arg	Gln	Val	Cys
			180					185					190		
Asp	Gln	Gly	Trp	Thr	Met	Asn	Asn	Ser	Arg	Val	Val	Cys	Gly	Met	Leu
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Gly	Phe	Pro	Ser	Gln	Thr	Ser	Val	Asn	Ser	His	Tyr	Tyr	Arg	Lys	Val
		210				215					220				
Trp	Asn	Leu	Lys	Met	Lys	Asp	Pro	Lys	Ser	Arg	Leu	Asn	Ser	Leu	Thr
225					230					235					240
Lys	Lys	Asn	Ser	Phe	Trp	Ile	His	Arg	Val	Asp	Cys	Phe	Gly	Thr	Glu
				245					250					255	
Pro	His	Leu	Ala	Lys	Cys	Gln	Val	Gln	Val	Ala	Pro	Gly	Arg	Gly	Lys
			260					265					270		
Leu	Arg	Ala	Ala	Cys	Pro	Gly	Gly	Met	His	Ala	Val	Val	Ser	Cys	Val
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Ala	Gly	Pro	His	Phe	Arg	Arg	Gln	Lys	Pro	Lys	Pro	Thr	Arg	Lys	Glu
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Ser	His	Ala	Glu	Glu	Leu	Lys	Val	Arg	Leu	Arg	Ser	Gly	Ala	Gln	Val
305					310					315					320
Gly	Glu	Gly	Arg	Val	Glu	Val	Leu	Met	Asn	Arg	Gln	Trp	Gly	Thr	Val
				325					330					335	
Cys	Asp	His	Arg	Trp	Asn	Leu	Ile	Ser	Ala	Ser	Val	Val	Cys	Arg	Gln
			340					345					350		
Leu	Gly	Phe	Gly	Ser	Ala	Arg	Glu	Ala	Leu	Phe	Gly	Ala	Gln	Leu	Gly
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Gln	Gly	Leu	Gly	Pro	Ile	His	Leu	Ser	Glu	Val	Arg	Cys	Arg	Gly	Tyr
		370				375					380				
Glu	Arg	Thr	Leu	Gly	Asp	Cys	Leu	Ala	Leu	Glu	Gly	Ser	Gln	Asn	Gly

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385		390		395		400									
Cys	Gln	His	Ala	Asn	Asp	Ala	Ala	Val	Arg	Cys	Asn	Ile	Pro	Asp	Met
				405					410					415	
Gly	Phe	Gln	Asn	Lys	Val	Arg	Leu	Ala	Gly	Gly	Arg	Asn	Ser	Glu	Glu
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Gly	Val	Val	Glu	Val	Gln	Val	Glu	Val	Asn	Gly	Val	Pro	Arg	Trp	Gly
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Thr	Val	Cys	Ser	Asp	His	Trp	Gly	Leu	Thr	Glu	Ala	Met	Val	Thr	Cys
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Tyr	Trp	Gln	Gly	Thr	Pro	Glu	Ala	Lys	Glu	Val	Val	Met	Ser	Gly	Val
			485					490						495	
Arg	Cys	Ser	Gly	Thr	Glu	Met	Ala	Leu	Gln	Gln	Cys	Gln	Arg	His	Gly
		500						505					510		
Pro	Val	His	Cys	Ser	His	Gly	Pro	Gly	Arg	Phe	Ser	Ala	Gly	Val	Ala
		515				520						525			
Cys	Met	Asn	Ser	Ala	Pro	Asp	Leu	Val	Met	Asn	Ala	Gln	Leu	Val	Gln
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Glu	Thr	Ala	Tyr	Leu	Glu	Asp	Arg	Pro	Leu	Ser	Met	Leu	Tyr	Cys	Ala
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His	Glu	Glu	Asn	Cys	Leu	Ser	Lys	Ser	Ala	Asp	His	Met	Asp	Trp	Pro
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Tyr	Gly	Tyr	Arg	Arg	Leu	Leu	Arg	Phe	Ser	Ser	Gln	Ile	Tyr	Asn	Leu
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Gly	Arg	Ala	Asp	Phe	Arg	Pro	Lys	Ala	Gly	Arg	His	Ser	Trp	Ile	Trp
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His	Gln	Cys	His	Arg	His	Tyr	His	Ser	Ile	Glu	Val	Phe	Thr	His	Tyr
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Ser	Phe	Cys	Leu	Glu	Asp	Thr	Asn	Cys	Pro	Ser	Gly	Val	Gln	Arg	Arg
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Tyr	Ala	Cys	Ala	Asn	Phe	Gly	Glu	Gln	Gly	Val	Ala	Val	Gly	Cys	Trp
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Asp	Thr	Tyr	Arg	His	Asp	Ile	Asp	Cys	Gln	Trp	Val	Asp	Ile	Thr	Asp
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Lys	Tyr	Asp	Gly	Gln	Arg	Val	Trp	Leu	His	Asn	Cys	His	Thr	Gly	Asp
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Ser	Tyr	Arg	Ala	Asn	Ala	Glu	Leu	Ser	Leu	Glu	Gln	Glu	Gln	Arg	Leu
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Arg	Asn	Asn	Leu	Ile											
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 <212> PRT
 <213> Mouse

<400> 53
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Pro	Ser	Gly	Gly	Phe	Asp	Leu	Glu	Asp	Ala	Leu	Pro	Gly	Gly	Gly	Gly
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Gly	Gly	Ala	Gly	Glu	Lys	Pro	Gly	Asn	Arg	Pro	Gln	Pro	Asp	Pro	Lys
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Pro	Pro	Arg	Pro	His	Gly	Asp	Ser	Gly	Gly	Ile	Ser	Asp	Ser	Asp	Leu
			85		90									95	
Ala	Asp	Ala	Ala	Gly	Gln	Gly	Gly	Gly	Ala	Gly	Arg	Arg	Gly	Ser	Gly
	100		105		110										
Asp	Glu	Gly	Gly	His	Gly	Gly	Ala	Gly	Gly	Ala	Glu	Pro	Glu	Gly	Thr
	115		120		125										
Pro	Gln	Gly	Leu	Val	Pro	Gly	Val	Val	Ala	Ala	Val	Val	Ala	Ala	Val
	130		135		140										
Ala	Gly	Ala	Val	Ser	Ser	Phe	Val	Ala	Tyr	Gln	Arg	Arg	Arg	Leu	Cys
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Phe	Arg	Glu	Gly	Gly	Ser	Ala	Pro	Val							
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<223> Made in a lab

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37

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<212> DNA

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<223> Made in a lab

<400> 57

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18

<210> 58

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<212> DNA

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Lys Pro Arg Val Trp Ser Val Pro Glu Asp Pro Tyr Gln Pro Arg Gln
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 Ala Thr Asn Asp Gln Ala Gln Ser Ser His Ser Pro Gly Leu Glu Ala
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 Asn Thr His Leu Ile Gly Asp
 305 310

<210> 60
 <211> 373
 <212> PRT
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<400> 60

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 Ser Ala Glu Ala Ala Arg Gly Pro Pro Arg Met Ala Asp Lys Val Val
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 35 40 45
 Val Glu Gly Asp Pro Pro Pro Leu Thr Met Trp Thr Lys Asp Gly Arg
 50 55 60
 Thr Ile His Ser Gly Trp Ser Arg Phe Arg Val Leu Pro Gln Gly Leu
 65 70 75 80
 Lys Val Lys Glu Val Glu Ala Glu Asp Ala Gly Val Tyr Val Cys Lys
 85 90 95
 Ala Thr Asn Gly Phe Gly Ser Leu Ser Val Asn Tyr Thr Leu Ile Ile
 100 105 110
 Met Asp Asp Ile Ser Pro Gly Lys Glu Ser Pro Gly Pro Gly Gly Ser
 115 120 125
 Ser Gly Gly Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg
 130 135 140
 Phe Thr Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val
 145 150 155 160
 Gly Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro
 165 170 175
 Asp Ile Met Trp Met Lys Asp Asp Gln Thr Leu Thr His Leu Glu Ala
 180 185 190
 Ser Glu His Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn Leu Lys
 195 200 205
 Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn Lys Ala Gly
 210 215 220
 Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln Arg Thr Arg Ser
 225 230 235 240
 Lys Pro Val Leu Thr Gly Thr His Pro Val Asn Thr Thr Val Asp Phe
 245 250 255
 Gly Gly Thr Thr Ser Phe Gln Cys Lys Val Arg Ser Asp Val Lys Pro
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 Val Ile Gln Trp Leu Lys Arg Val Glu Tyr Gly Ser Glu Gly Arg His
 275 280 285
 Asn Ser Thr Ile Asp Val Gly Gly Gln Lys Phe Val Val Leu Pro Thr
 290 295 300
 Gly Asp Val Trp Ser Arg Pro Asp Gly Ser Tyr Leu Asn Lys Leu Leu
 305 310 315 320
 Ile Ser Arg Ala Arg Gln Asp Asp Ala Gly Met Tyr Ile Cys Leu Gly
 325 330 335
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 Thr Ser Leu Pro Trp
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 35 40 45
 Met Ala Pro Gln His Ile Leu Ala Ser Gly Ser Thr Ala Gly Pro Lys
 50 55 60
 Leu Tyr Pro Lys Leu Tyr Thr Asp Val His Thr His Thr His Thr His
 65 70 75 80
 Thr Cys Thr His Thr Leu Ser Cys Gly Gly Gln Gly Ser Ser Thr Pro
 85 90 95
 Ala Cys Pro Leu Ser Val Leu Asn Thr Ala Asn Leu Gln Ala Leu Cys
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 Pro Glu Val Gly Ile Trp Gly Pro Arg Gln Gln Val Gly Arg Ile Glu
 115 120 125
 Asn Asn Gly Gly Arg Val Ser
 130 135